

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-3. (Canceled)

4. (Previously Presented) An exposure method in which a second object is exposed, via a projection system, with an exposure beam that has passed a pattern of a first object, said exposure method comprising:

disposing a stage holding said first object or said second object and moving on a base member in a space supplied with a first gas that transmits said exposure beam;

floating said stage on said base member in a differential exhaust system by blowing a second gas and sucking said second gas; and

setting the permissible absorbency limits of said second gas relative to said exposure beam higher than that of said first gas.

5. (Previously Presented) An exposure method according to claim 4, wherein said first gas and said second gas are different gases from each other.

6-11. (Canceled)

12. (Previously Presented) An exposure apparatus in which a second object is exposed, via a projection system, with an exposure beam that has passed a pattern of a first object, said exposure apparatus comprising:

a stage that holds said first object or said second object and moves on a base member;

a chamber that substantially hermetically seals a space enclosing said stage;

a gas supply device that supplies a first gas that transmits said exposure beam into said chamber;

an air bearing device that floats said stage on said base member in a differential exhaust system by blowing a second gas and sucking said second gas; and
a setting device that sets the permissible absorbency limits of said second gas relative to said exposure beam higher than that of said first gas.

13-15. (Canceled)

16. (Currently Amended) An exposure method for exposing a second object, via a projection system, with an exposure beam that has passed through a pattern of a first object, comprising:

enclosing a first space, of spaces between the projection system and the second object, on the projection system side by an enclosure member in which a first aperture is formed in a region in which the exposure beam is transmitted,

substantially sealing the first space, excluding said first aperture of the enclosure member,

supplying a gas that transmits the exposure beam into the ~~enclosure member~~ first space from a supply port, which is different from the first aperture, provided in the enclosure member, and exhausting the gas ~~supplied into the enclosure member in the first space from a second aperture~~ an exhaust port, which is different from the first aperture.

17. (Currently Amended) The exposure method as set forth in claim 16, wherein in the first space, the gas is supplied from the supply port arranged on one side ~~so as to surround an optical path~~ of the exposure beam, and

in the first space, the gas is exhausted from the ~~second aperture~~ exhaust port arranged on the other side ~~so as to surround an optical path~~ of the exposure beam.

18. (Currently Amended) The exposure method as set forth in claim 17, wherein the ~~second aperture is an exhaust port~~ is arranged facing the supply port.

19. (Previously Presented) The exposure method as set forth in claim 18, wherein in the first space, the gas flows in one direction.
20. (Currently Amended) The exposure method as set forth in claim 16, wherein the exposure beam is vacuum ultraviolet light with 180 nm wavelength or less, and the gas that transmits the exposure beam is a ~~noble~~-rare gas or nitrogen gas.
21. (Previously Presented) The exposure method as set forth in claim 16, wherein a measuring beam and a reference beam are irradiated onto a stage and a predetermined reference member, respectively, that move along with the first object or the second object, and a position of the first object or the second object with respect to the reference member is measured; and
the optical paths of the measuring beam and the reference beam are made to have a gas atmosphere with approximately the same contamination degree of impurities that absorb the exposure beam.
22. (Previously Presented) The exposure method as set forth in claim 16, wherein a substance from the second object generated by irradiating the exposure beam is exhausted along with the gas flowing through the first space.
23. (Previously Presented) The exposure method as set forth in claim 16, wherein the enclosure member has an aperture in a region in which a detecting beam for detecting a position of the second object is transmitted.
24. (Previously Presented) An exposure method for exposing a second object, via a projection system, with an exposure beam that has passed through a pattern of a first object, comprising:
enclosing a first space, of spaces between the projection system and the second object, on the projection system side by an enclosure member in which a first aperture is formed in a region in which the exposure beam is transmitted,

supplying a first gas that transmits the exposure beam into the enclosure member from a gas supply port provided in the enclosure member,

exhausting a substance generated from the second object enclosed in the enclosure member, along with the first gas, from a second aperture different from the first aperture, and

exhausting a substance generated from the second object and existing in a second space from the second space.

25. (Previously Presented) The exposure method as set forth in claim 24, wherein the gas supply port and the second aperture different from the first aperture are arranged facing each other.

26. (Previously Presented) The exposure method as set forth in claim 25, wherein in the first space, the first gas flows in one direction.

27. (Previously Presented) The exposure method as set forth in claim 24, wherein the second space is formed by arranging the enclosure member so as not to contact the second object.

28. (Previously Presented) The exposure method as set forth in claim 27, wherein an interval between the enclosure member and the second object is 5 mm or less.

29. (Previously Presented) The exposure method as set forth in claim 24, wherein a second gas transmitting the exposure beam is supplied to a chamber containing the second object and a stage holding the second object, and the second gas flows into the second space.

30. (Previously Presented) The exposure method as set forth in claim 29, wherein the chamber has an exhaust port that exhausts a substance generated from the second object and existing in the second space.

31. (Previously Presented) The exposure method as set forth in claim 29, wherein a contamination degree of impurities that absorb the exposure beam of the first gas in the first space is lower than that of the second gas in the second space.

32. (Currently Amended) An exposure apparatus that exposes a second object, via a projection system, with an exposure beam that has passed through a pattern of a first object, comprising:

an enclosure member arranged between the projection system and the second object and surrounding a first space, of spaces between the projection system and the second object, on the projection system side, and substantially sealing the first space, excluding a first aperture of the enclosure member through which the exposure beam is transmitted;

a first gas supply mechanism arranged in the ~~enclosure member~~ first space and supplying a first gas, which transmits the exposure beam, into the ~~enclosure member~~ first space through a supply port different from the first aperture; and

a first exhaust mechanism arranged in the enclosure member ~~that exhausts the gas within the enclosure member from a second aperture different from a first aperture through which the exposure beam is transmitted~~ and exhausting the gas in the first space through an exhaust port different from the first aperture.

33. (Currently Amended) The exposure apparatus as set forth in claim 32, wherein the ~~enclosure member has a supply port arranged on one side and sandwiching an optical path of the exposure beam and an~~ and the exhaust port are arranged on the other opposite side and sandwiching the of an optical path of the exposure beam, and ~~the first gas supply mechanism is connected to the supply port, and the first exhaust mechanism is connected to the second aperture.~~

34. (Previously Presented) The exposure apparatus as set forth in claim 33, wherein the enclosure member is arranged so as not to contact the second object.

35. (Previously Presented) The exposure apparatus as set forth in claim 34, wherein the enclosure member is supported by the projection system.
36. (Previously Presented) The exposure apparatus as set forth in claim 34, wherein an interval between the enclosure member and the second object is 5 mm or less.
37. (Previously Presented) The exposure apparatus as set forth in claim 33, wherein the enclosure member is provided with an aperture plate in which the first aperture through which the exposure light is transmitted is formed and a partition wall member arranged between the aperture plate and the projection system, and the supply port and the exhaust port are arranged in the partition wall member.
38. (Previously Presented) The exposure apparatus as set forth in claim 32, further comprising:
a chamber which substantially seals a second space, of the spaces between the projection system and the second object, on the second object side, excluding the aperture of the enclosure member, and
a second gas supply mechanism connected to the chamber and supplying the second gas, which transmits through the exposure beam, into the chamber.
39. (Previously Presented) The exposure apparatus as set forth in claim 38, further comprising:
a stage contained within the chamber and holding the second object;
a reference member arranged in the projection system and being stationary with respect to the projection system; and
an interferometer that irradiates a measuring beam and a reference beam onto the stage and the reference member, respectively, and measures a position of the first object or the second object with respect to the reference member.

40. (Previously Presented) The exposure apparatus as set forth in claim 39, wherein a contamination degree of impurities that absorb the exposure beam is approximately the same in an optical path of the measuring beam and an optical path of the reference beam.

41. (Previously Presented) The exposure apparatus as set forth in claim 32, further comprising:

a second exhaust mechanism arranged at a position different from a position of the first exhaust mechanism, and exhausting a substance generated from the second object and existing in a second space, of the spaces between the projection system and the second object on the second object side.

42. (Previously Presented) The exposure apparatus as set forth in claim 41, further comprising:

a chamber arranged around a stage that holds the second object, and containing the stage, and

a second gas supply mechanism connected to the chamber and supplying a second gas, which transmits the exposure beam, into the chamber,

wherein the second exhaust mechanism is arranged in the chamber.

43-44. (Canceled)

45. (Currently Amended) A method of manufacturing a device, including a process in which a device pattern is transferred onto a workpiece,

wherein the device pattern is transferred onto the workpiece, using the exposure method as set forth in claim ~~1~~ 16.

46. (New) The exposure apparatus as set forth in claim 34, further comprising a position detecting mechanism which irradiates a beam to the second object through the first aperture, and detects the beam reflected by the second object through the first aperture.

47. (New) The exposure apparatus as set forth in claim 34, further comprising a position detecting mechanism which irradiates a beam to the second object and detects the beam reflected by the second object, and the enclosure member has an aperture in a region in which the detecting beam is transmitted.

48. (New) The exposure apparatus as set forth in claim 34, wherein at least a part of the enclosure member is arranged between the second object and a lens which is the nearest lens of the projection system.

49. (New) The exposure apparatus as set forth in claim 37, wherein at least a part of the aperture plate is arranged between the second object and a lens which is the nearest lens of the projection system.

50. (New) An exposure apparatus that exposes a second object, via a projection system, with an exposure beam that has passed through a pattern of a first object, comprising:
a first enclosure member arranged between the projection system and the second object, and surrounding a first space, of spaces between the projection system and the second object, on the projection system side, and having a first aperture of the enclosure member through which the exposure beam is transmitted;

a first gas supply mechanism arranged in the first enclosure member and supplying a first gas, which transmits the exposure beam, into the first space through a supply port different from the first aperture;

a first exhaust mechanism arranged in the first enclosure member and exhausting the gas in the first space through an exhaust port different from the first aperture;

a stage holding the second object;

a second enclosure member which encloses the stage, the second object, the first enclosure member and a part of projection system;

a second gas supply mechanism supplying a second gas, which transmits the exposure beam, into the space surrounded by the second enclosure member; and

a second gas exhaust mechanism exhausting a gas in the space surrounded by the second enclosure member.

51. (New) An exposure apparatus as set forth in claim 50, wherein a contamination degree of impurities that absorb the exposure beam of the first gas in the first space is lower than that of the second gas in the space surrounded by the second enclosure member.